

Title (en)

STEERABLE BEAM ANTENNA WITH CONTROLLABLY VARIABLE POLARIZATION

Title (de)

STEUERBARE STRAHLANTENNE MIT STEUERBAR VARIABLER POLARISIERUNG

Title (fr)

ANTENNE À FAISCEAU ORIENTABLE PRÉSENTANT UNE POLARISATION VARIABLE POUVANT ÊTRE COMMANDÉE

Publication

EP 3804033 A4 20220316 (EN)

Application

EP 19814496 A 20190530

Priority

- US 201816003639 A 20180608
- US 2019034732 W 20190530

Abstract (en)

[origin: US2019379120A1] A steerable beam antenna includes a feed line and first and second arrays of switchable scatterers along opposite sides of the feed line. The first array scatters an electromagnetic wave propagating through the feed line to form a first beam portion with a first polarization, and the second array scatters the propagating wave to form a second beam portion with a second polarization orthogonal to the first polarization. Each scatterer in the first and second arrays is switchable between a high state and a low state, the high state scatterers and the low-state scatterers in each of the first and second arrays defining a periodic pattern. The scatterers in the first and second arrays are switchable to shift the pattern of scatterers in one of the arrays relative to the pattern in the other array by a selectable period shift that yields a desired polarization for the beam.

IPC 8 full level

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CPC (source: EP US)

H01Q 3/01 (2013.01 - US); **H01Q 3/247** (2013.01 - EP); **H01Q 3/2635** (2013.01 - US); **H01Q 3/36** (2013.01 - US); **H01Q 15/24** (2013.01 - EP); **H01Q 21/0006** (2013.01 - US); **H01Q 21/245** (2013.01 - US); **H04B 7/0617** (2013.01 - EP); **H04B 7/10** (2013.01 - EP); **H01Q 3/24** (2013.01 - US); **H01Q 13/28** (2013.01 - EP); **H01Q 15/24** (2013.01 - US); **H01Q 15/244** (2013.01 - US); **H01Q 21/24** (2013.01 - US); **H01Q 25/00** (2013.01 - US)

Citation (search report)

- [Y] US 2015357711 A1 20151210 - MANASSON VLADIMIR A [US], et al
- [Y] US 2016372834 A1 20161222 - BILY ADAM [US], et al
- See also references of WO 2019236383A1

Designated contracting state (EPC)

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US 11121465 B2 20210914; **US 2019379120 A1 20191212**; EP 3804033 A1 20210414; EP 3804033 A4 20220316; WO 2019236383 A1 20191212

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